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PATENT & TRADEMARK OFFICE

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

June 21, 2000

In re application of: Carol W. Readhead, Robert Winston, H. Phillip Koeffler and Carsten Müller
Serial No.: 09/292,723
Filed on: April 15, 1999
Title: TRANSFECTION, STORAGE AND TRANSFER OF MALE GERM CELLS FOR GENERATION OF TRANSGENIC SPECIES & GENETIC THERAPIES

Examiner: Unknown
Group: 1632

TRANSMITTAL OF FORMAL DRAWINGS

Assistant Commissioner for Patents
Washington, D. C. 20231

Attention: Drawing Review Branch

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO DRAWING REVIEW BRANCH, THE ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, D. C. 20231,
ON June 21, 2000
DATE
BY _____
ANN WEISS
June 21, 2000
(DATE OF SIGNATURE

Sir:

Transmitted herewith for filing in the above-identified application are nine sheets of formal drawings.

Respectfully submitted,

PRETTY, SCHROEDER & POPLAWSKI, P.C.

Nisan A. Steinberg, Ph.D.
Registration No. 40,345

NAS:aw
Enclosure

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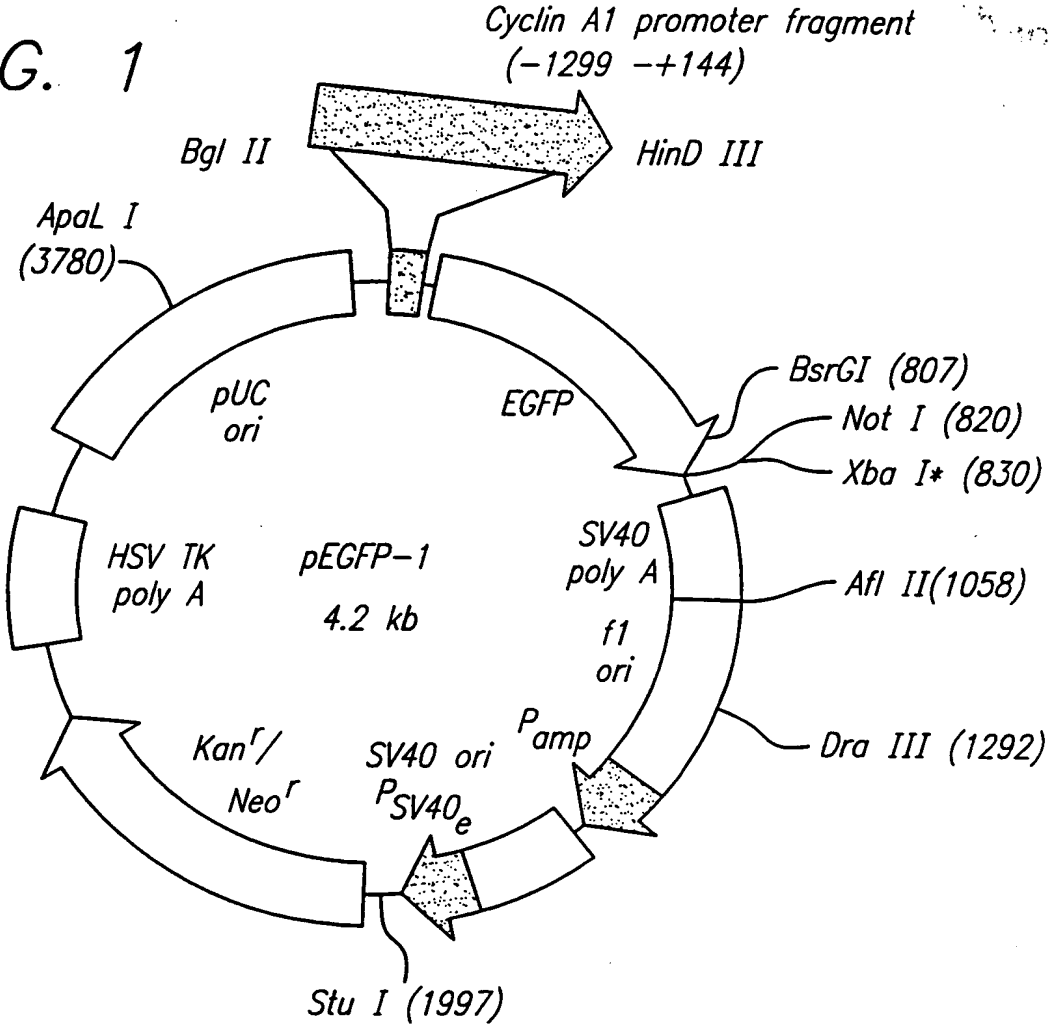
FIG. 1


Cyclin A1 promoter fragment
(−1299 −+144)
Bgl II
HinD III
ApaL I
(3780)
pUC
ori
EGFP
BsrGI (807)
Not I (820)
Xba I* (830)
HSV TK
poly A
pEGFP−1
4.2 kb
SV40
poly A
AfI II(1058)
f1
ori
Kan^r/
Neo^r
SV40 ori
P_SV40e
P_amp
Dra III (1292)
Stu I (1997)

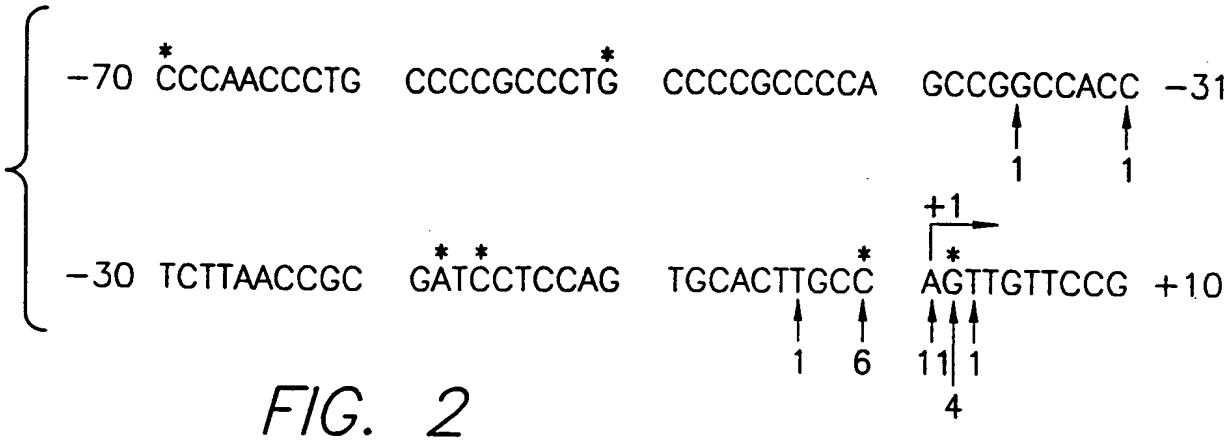

−70 CCCAACCCTG CCCCGCCCTG CCCCGCCCCA GCCGGCCACC −31
1 1
+1
−30 TCTTAACCGC GATCCTCCAG TGCACTTGCC AGTTGTTCCG +10
1 6 11 1
4

FIG. 2

FIG. 3

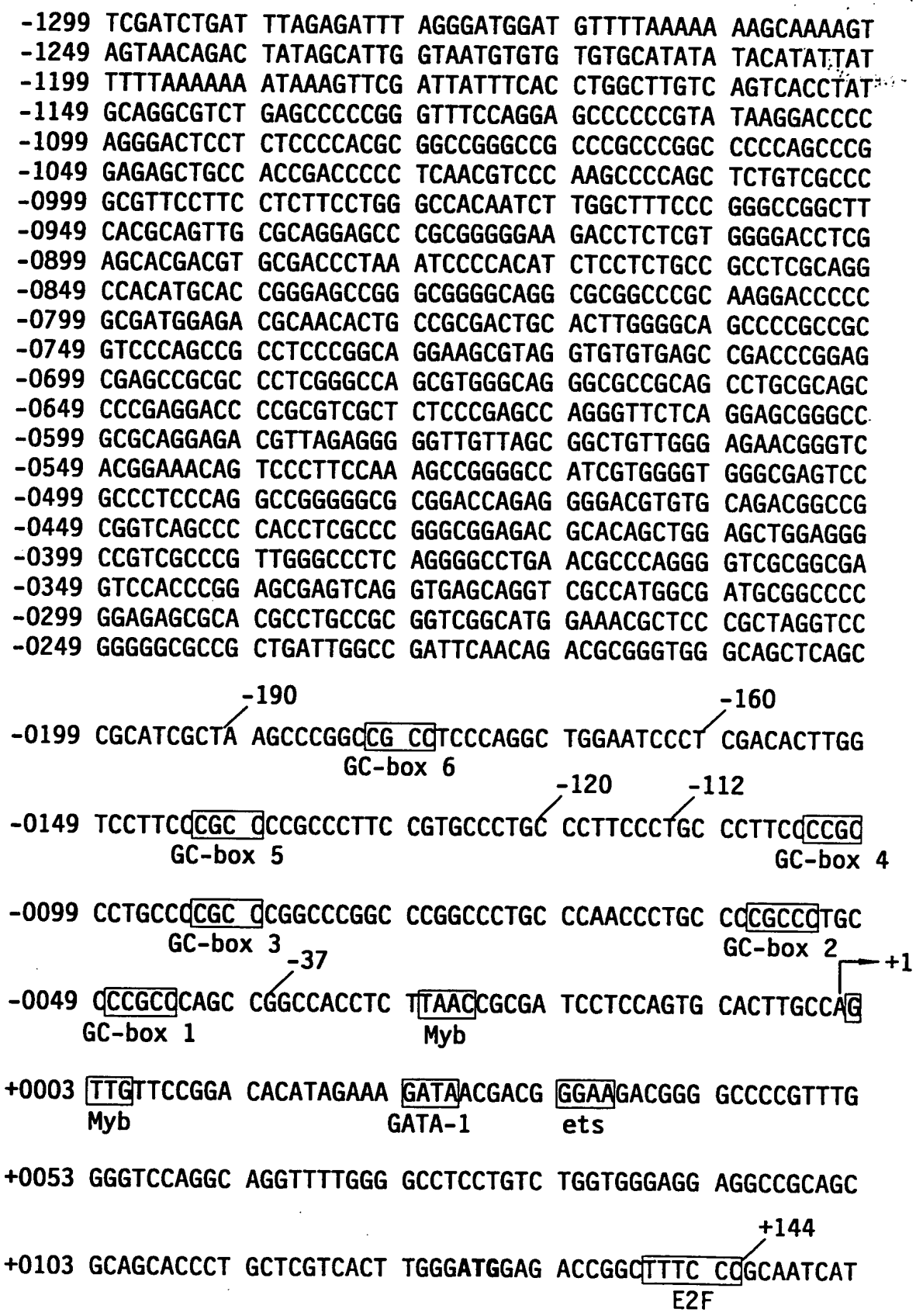
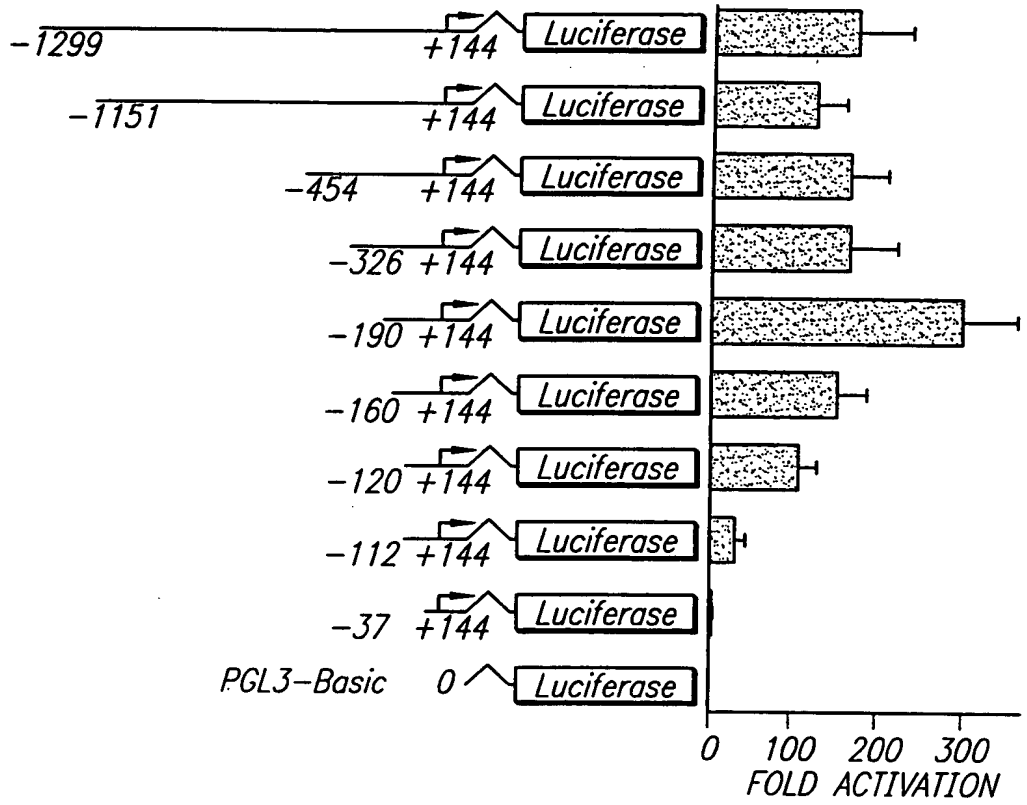

-1299 TCGATCTGAT TTAGAGATTT AGGGATGGAT GTTTTAAAAA AAGCAAAAGT
-1249 AGTAACAGAC TATAGCATTG GTAATGTGTG TGTGCATATA TACATATTAT
-1199 TTTTAAAAAA ATAAAGTTCG ATTATTTCAC CTGGCTTGTC AGTCACCTAT
-1149 GCAGGCGTCT GAGCCCCCGG GTTTCCAGGA GCCCCCCGTA TAAGGACCCC
-1099 AGGGACTCCT CTCCCCACGC GGCCGGGCCG CCCGCCCGGC CCCCAGCCCG
-1049 GAGAGCTGCC ACCGACCCCC TCAACGTCCC AAGCCCCAGC TCTGTCGCCC
-0999 GCGTTCCTTC CTCTTCCTGG GCCACAATCT TGGCTTTCCC GGGCCGGCTT
-0949 CACGCAGTTG CGCAGGAGCC CGCGGGGGAA GACCTCTCGT GGGGACCTCG
-0899 AGCACGACGT GCGACCCTAA ATCCCCACAT CTCCTCTGCC GCCTCGCAGG
-0849 CCACATGCAC CGGGAGCCGG GCGGGGCAGG CGCGGCCCGC AAGGACCCCC
-0799 GCGATGGAGA CGCAACACTG CCGCGACTGC ACTTGGGGCA GCCCCGCCGC
-0749 GTCCCAGCCG CCTCCCGGCA GGAAGCGTAG GTGTGTGAGC CGACCCGGAG
-0699 CGAGCCGCGC CCTCGGGCCA GCGTGGGCAG GGCGCCGCAG CCTGCGCAGC
-0649 CCCGAGGACC CCGCGTCGCT CTCCCGAGCC AGGGTTCTCA GGAGCGGGCC
-0599 GCGCAGGAGA CGTTAGAGGG GGTTGTTAGC GGCTGTTGGG AGAACGGGTC
-0549 ACGGAAACAG TCCCTTCCAA AGCCGGGGCC ATCGTGGGGT GGGCGAGTCC
-0499 GCCCTCCCAG GCCGGGGGCG CGGACCAGAG GGGACGTGTG CAGACGGCCG
-0449 CGGTCAGCCC CACCTCGCCC GGGCGGAGAC GCACAGCTGG AGCTGGAGGG
-0399 CCGTCGCCCG TTGGGCCCTC AGGGGCCTGA ACGCCCAGGG GTCGCGGCGA
-0349 GTCCACCCGG AGCGAGTCAG GTGAGCAGGT CGCCATGGCG ATGCGGCCCC
-0299 GGAGAGCGCA CGCCTGCCGC GGTCGGCATG GAAACGCTCC CGCTAGGTCC
-0249 GGGGGCGCCG CTGATTGGCC GATTCAACAG ACGCGGGTGG GCAGCTCAGC
-190
-160
-0199 CGCATCGCTA AGCCCGGCCG CGTCCCAGGC TGGAATCCCT CGACACTTGG
GC-box 6
-120
-112
-0149 TCCTTCCGCC GCCGCCCTTC CGTGCCCTGC CCTTCCCTGC CCTTCCCCGC
GC-box 5
GC-box 4
-0099 CCTGCCCGCC GCGGCCCGGC CCGGCCCTGC CCAACCCTGC CCCGCCCTGC
GC-box 3
GC-box 2
-37
+1
-0049 CCCCGCCAGC CGGCCACCTC TTAACCGCGA TCCTCCAGTG CACTTGCCAG
GC-box 1
Myb
+0003 TTGTTCCGGA CACATAGAAA GATAACGACG GGAAGACGGG GCCCCGTTTG
Myb
GATA-1
ets
+0053 GGGTCCAGGC AGGTTTTGGG GCCTCCTGTC TGGTGGGAGG AGGCCGCAGC
+144
+0103 GCAGCACCCT GCTCGTCACT TGGGATGGAG ACCGGCTTTC CGGCAATCAT
E2F

FIG. 4


-1299 +144 Luciferase
-1151 +144 Luciferase
-454 +144 Luciferase
-326 +144 Luciferase
-190 +144 Luciferase
-160 +144 Luciferase
-120 +144 Luciferase
-112 +144 Luciferase
-37 +144 Luciferase
PGL3-Basic 0 Luciferase
0 100 200 300
FOLD ACTIVATION

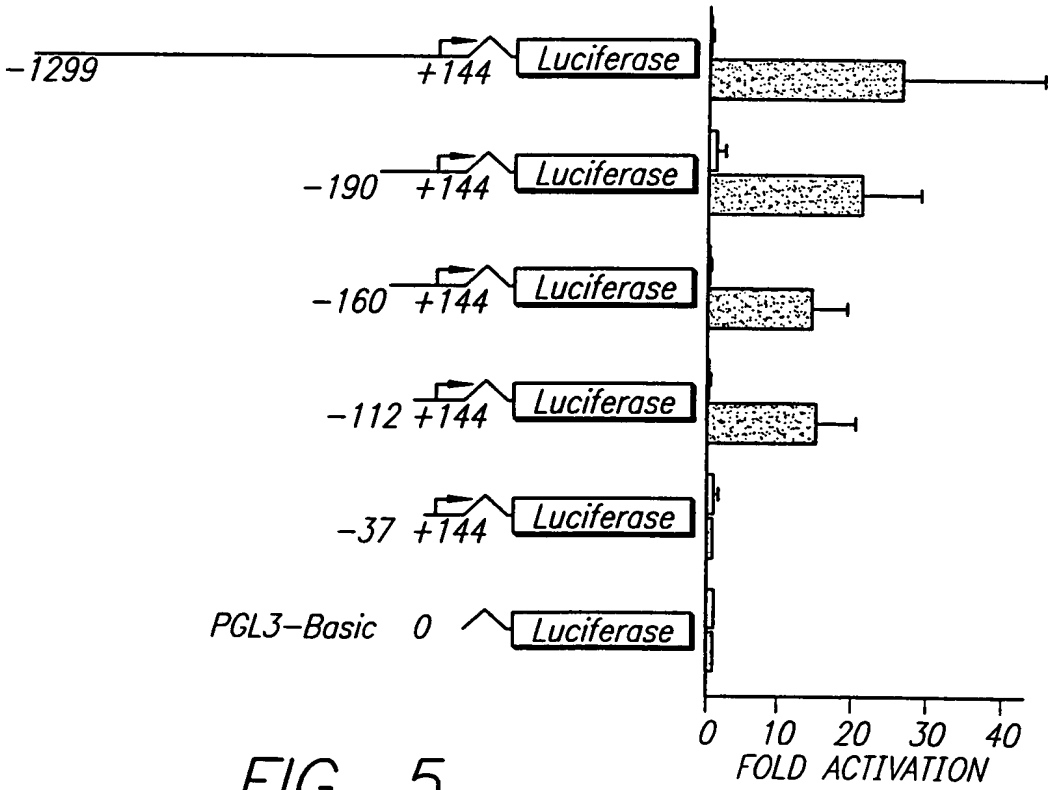

-1299 +144 Luciferase
-190 +144 Luciferase
-160 +144 Luciferase
-112 +144 Luciferase
-37 +144 Luciferase
PGL3-Basic 0 Luciferase
0 10 20 30 40
FOLD ACTIVATION

FIG. 5

FIG. 6

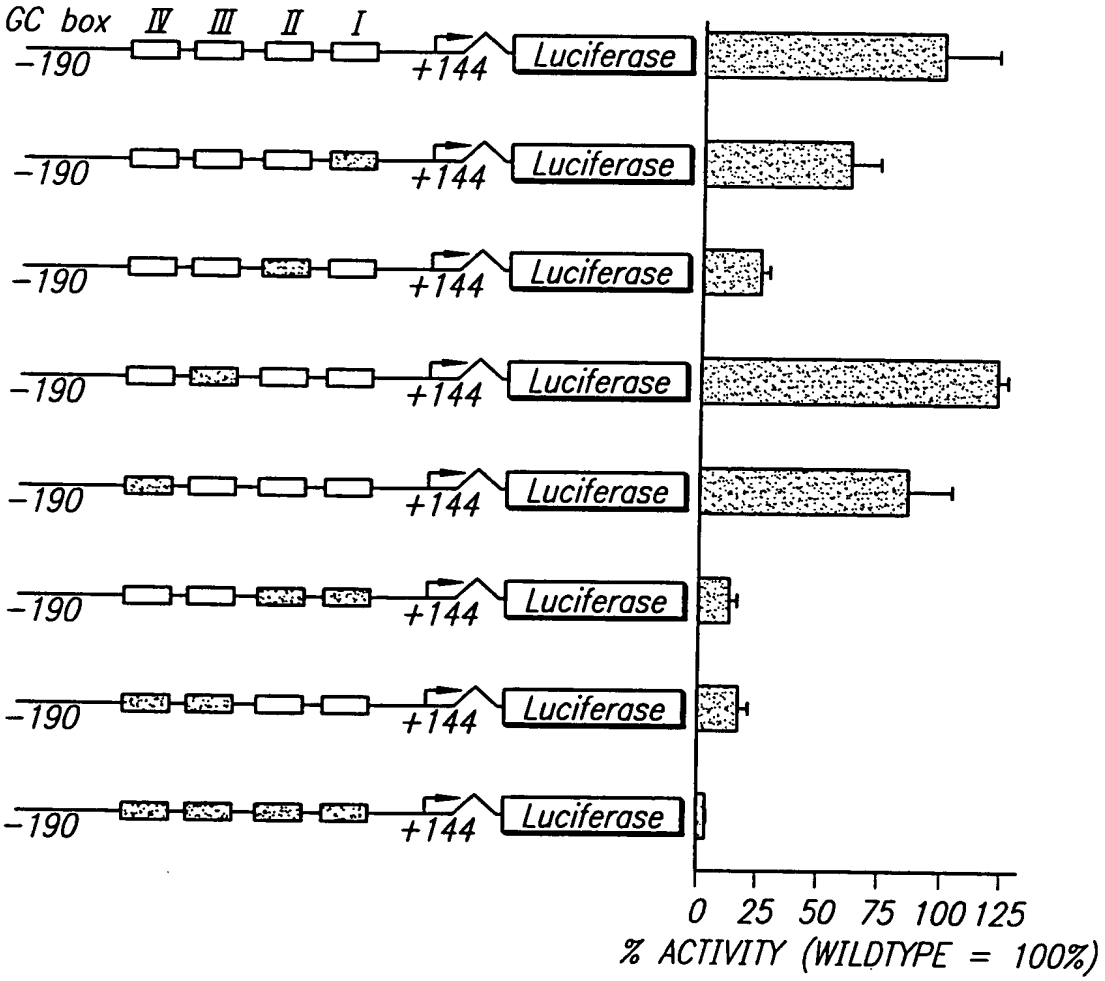
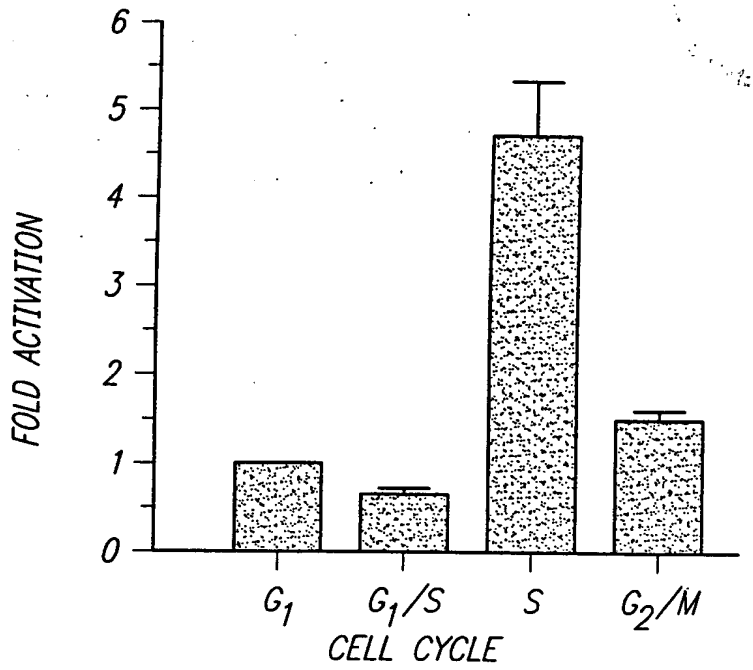

GC box
IV
III
II
I
-190
+144
Luciferase
0
25
50
75
100
125
% ACTIVITY (WILDTYPE = 100%)

FIG. 7a



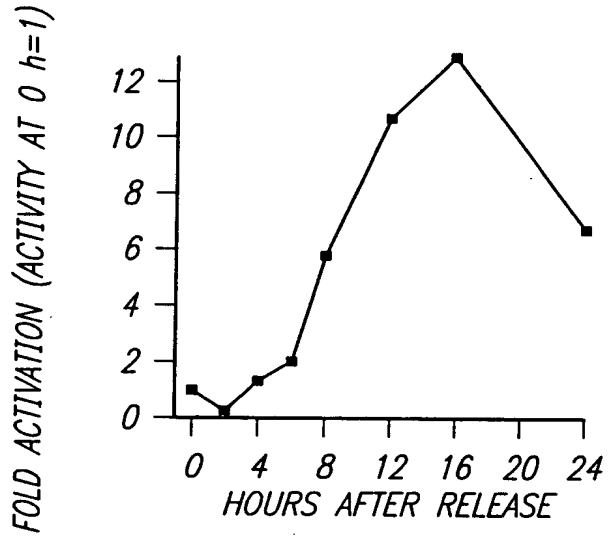


FIG. 7b

FIG. 7c

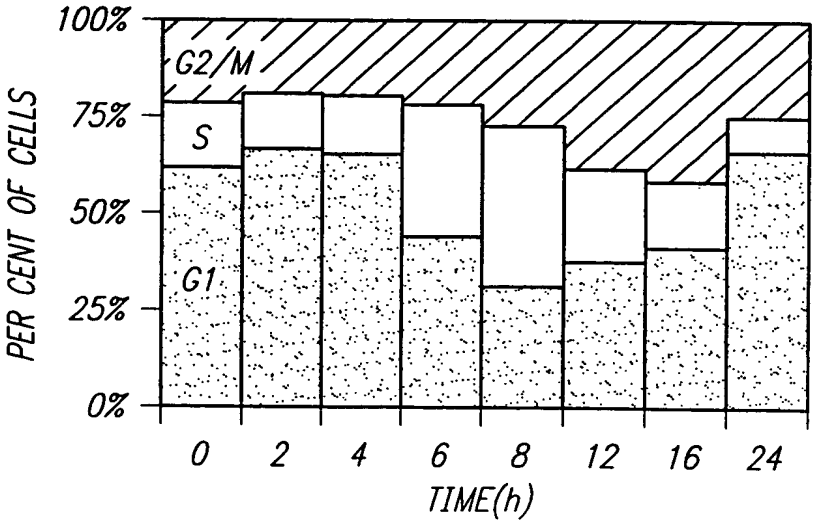
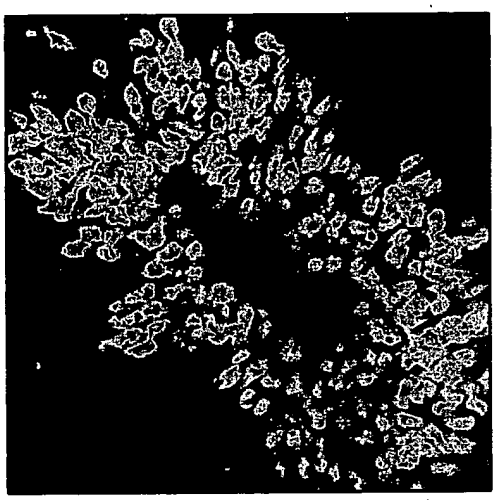


FIG. 8a

FIG. 8b



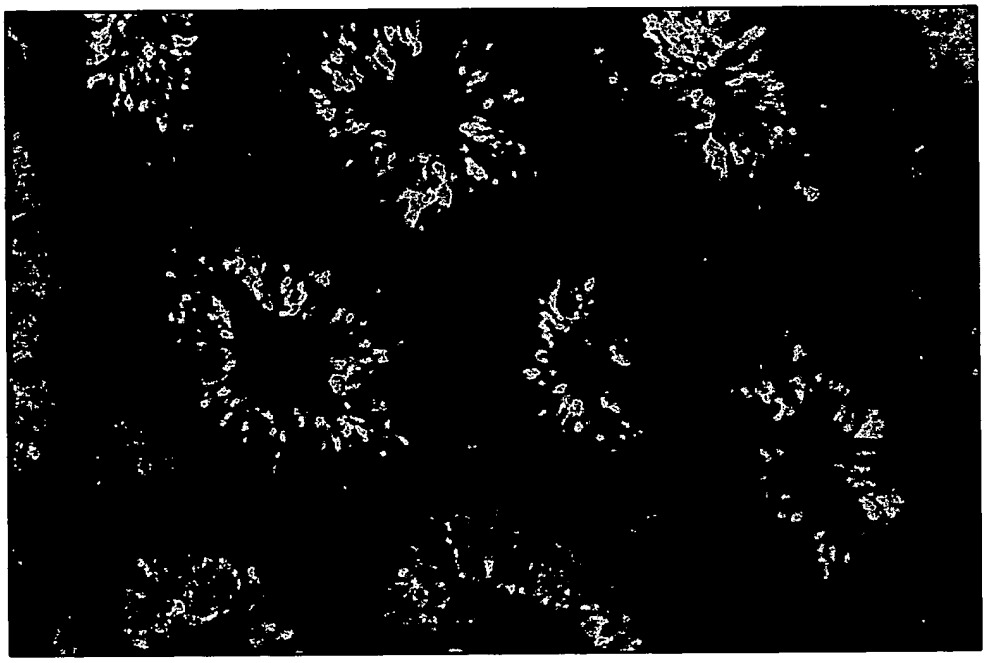


FIG. 8c

FIG. 9b

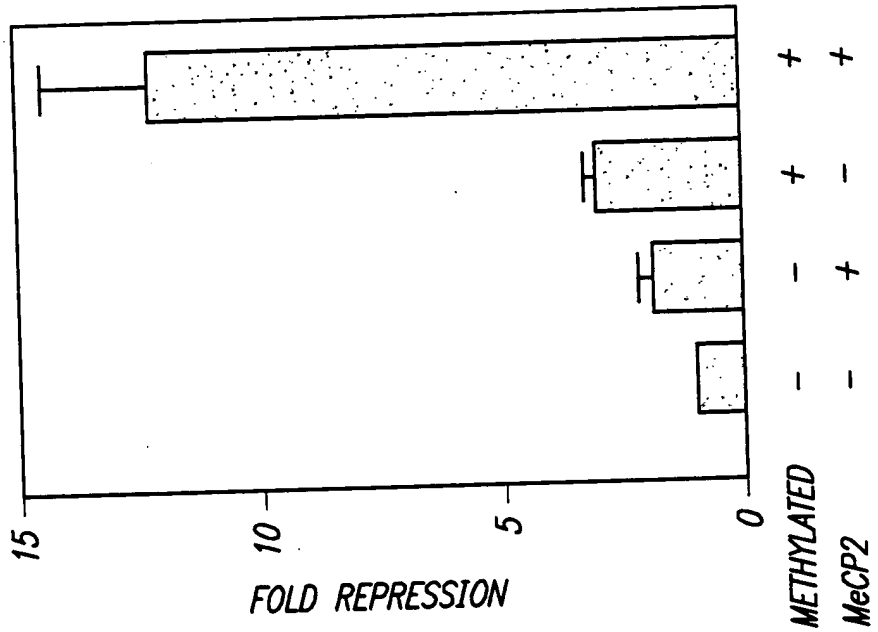

15
10
5
0
FOLD REPRESSION
METHYLATED
MeCP2
- - + +
- + - +

FIG. 9a

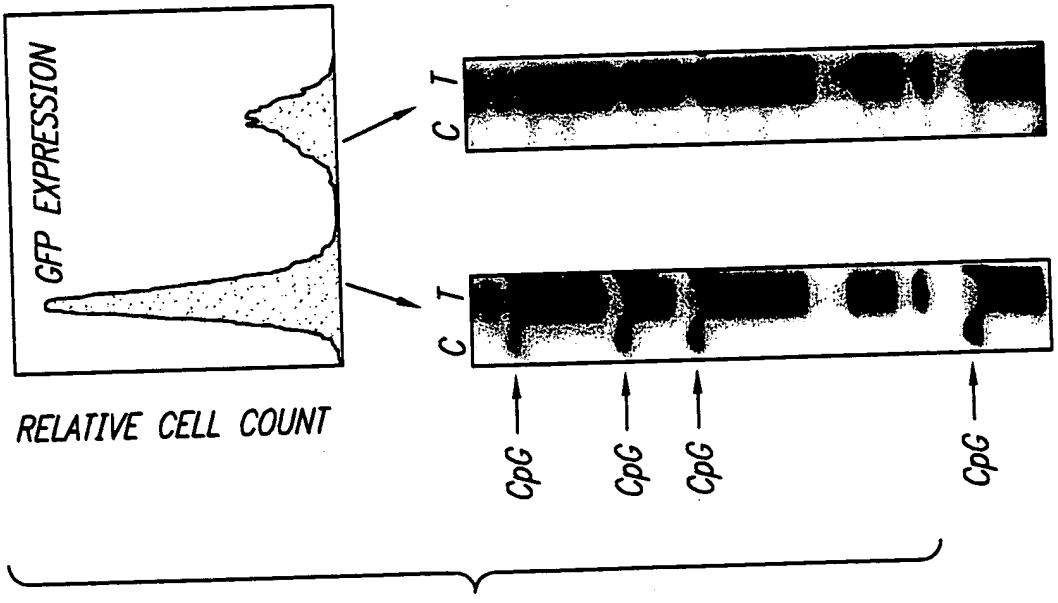

GFP EXPRESSION
RELATIVE CELL COUNT
C I
C I
CpG
CpG
CpG
CpG

FIG. 10a

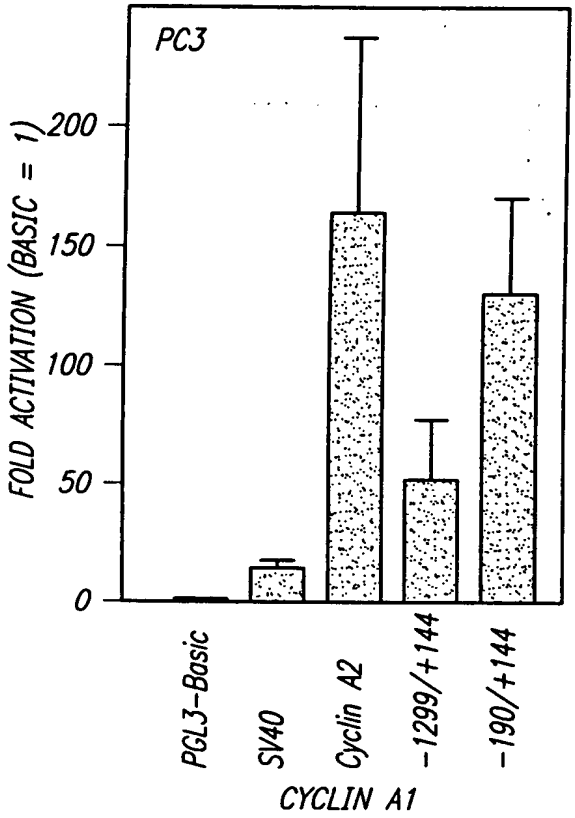


FIG. 10b

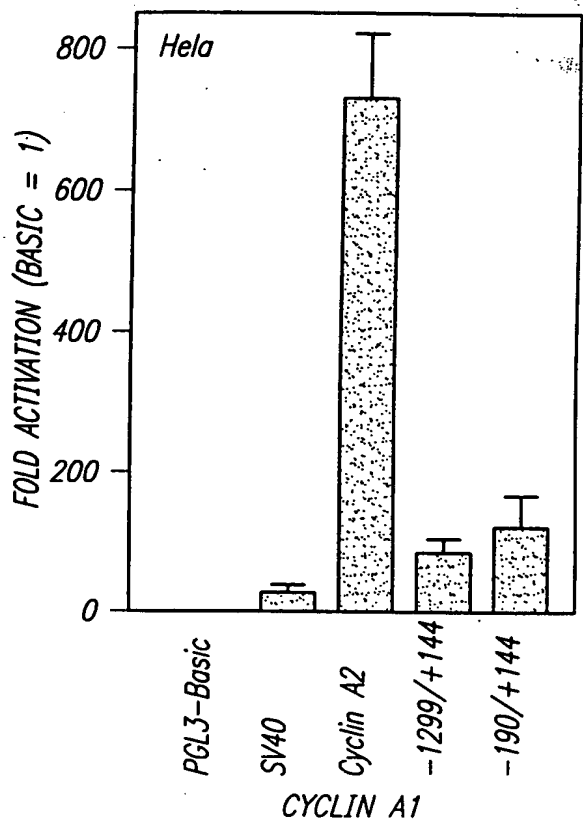


FIG. 10c

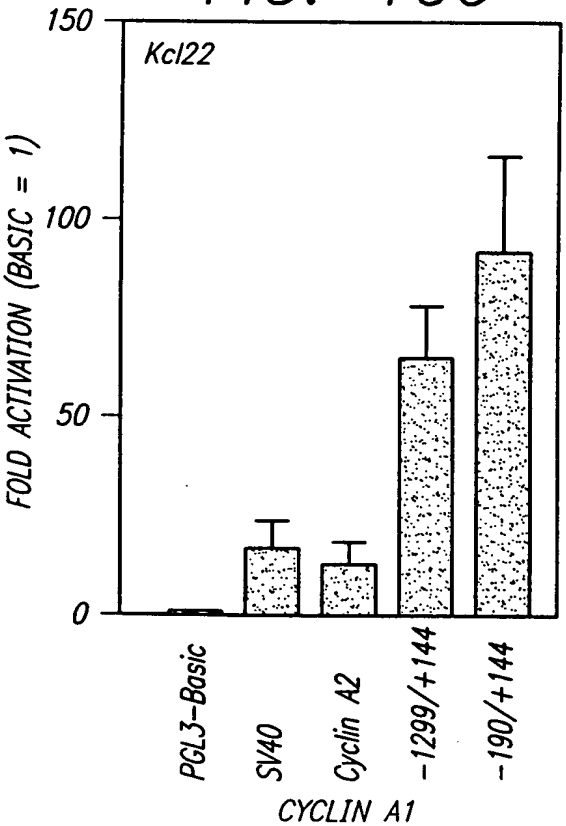


FIG. 10d

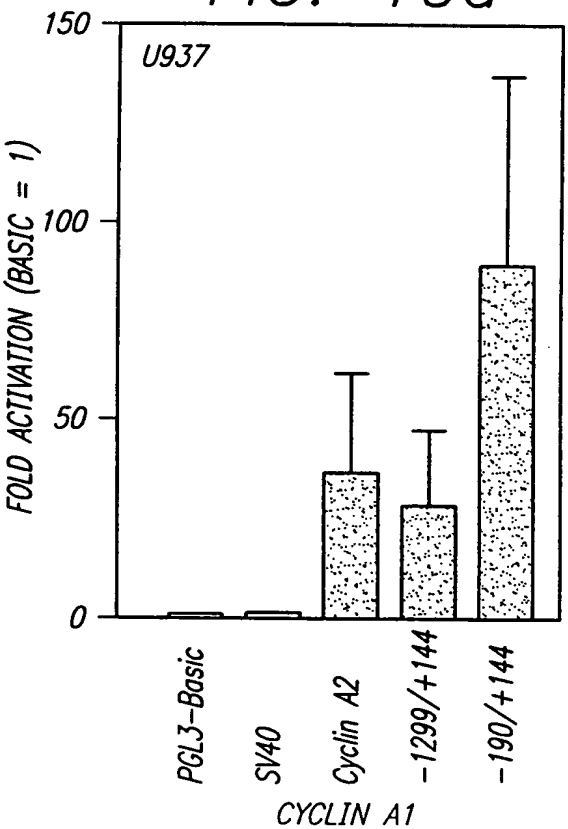


FIG. 11b

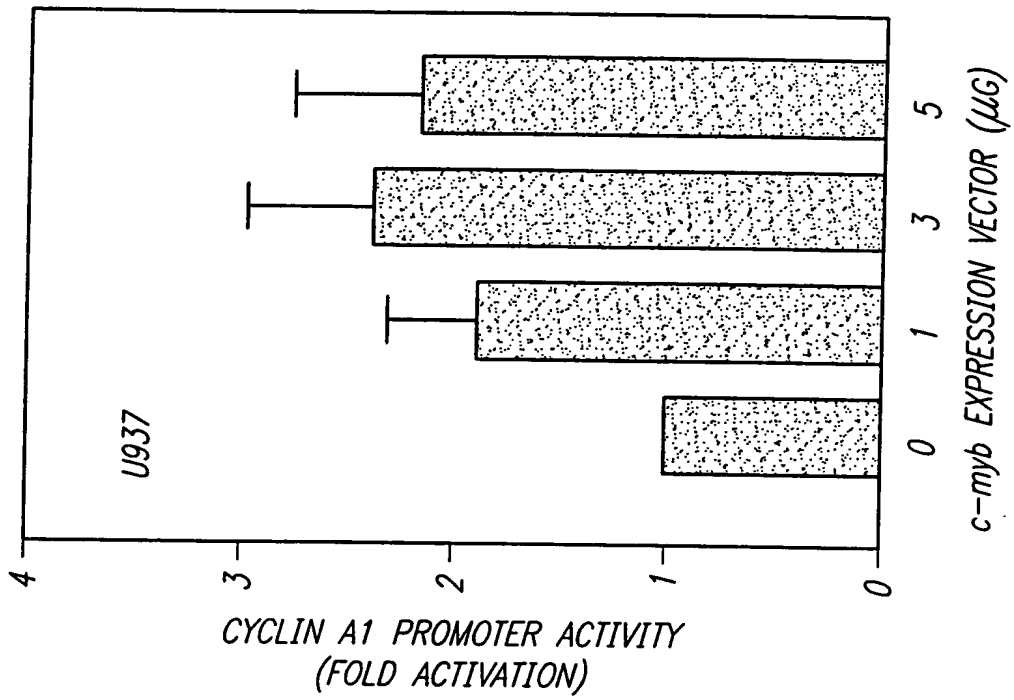
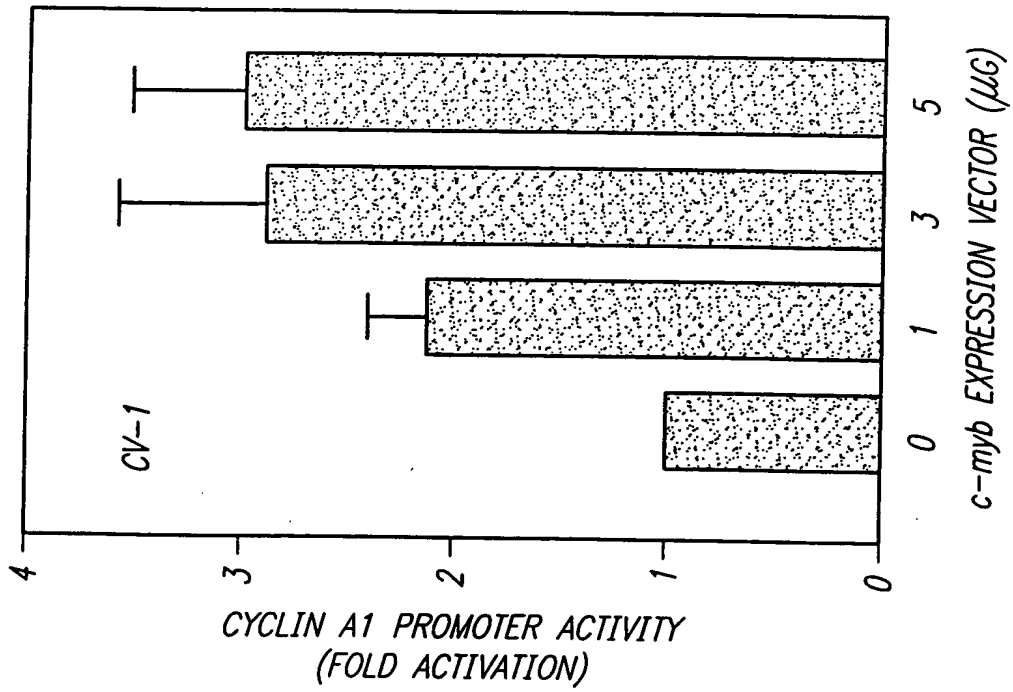



FIG. 11a